450-550 Watts 12V **DS450-3/DS550-3**

Distributed Power Bulk Front-End
Total Output Power: 450W - 550W
+12vdc Main Output +3.3vdc Stand-By Output
Wide Range Input Voltage: 90 - 264VAC

Distributed Power System



Special Features

- Active Power Factor Correction
- EN61000-3-2 Harmonic Compliance
- Active AC Inrush Control
- 1U X 2U Form Factor
- 10.3W / in³ (DS550) 8.4W / in³ (DS450)
- +12vdc Output
- +3.3vdc Stand-By
- No Minimum Load Required
- Hot Plug Operation
- N + 1 Redundant
- Internal OR'ing Fets
- Active Current Sharing
- Built-in Cooling Fans (40mm x 28mm)
- I²C Communication Interface Bus
- EERPOM for FRU Data
- Amber LED Status, Fan_Fail
- Green LED Status, Power Good / AC_OK Status
- Internal Fan Speed Control
- Fan Fail Tach Output Signal
- One Year Warranty

Environmental

Operating Temperature: -10°C to 50°C

(50% power derating at 70°C)

Storage Temperature: -40° to +70°C

Altitude, Operating 10,000ft

Electromagnetic Susceptibility / Input Transients:

-EN61000-3-2, -3-3

-EN61000-4-2, 4-4, -4-5, 4-11 Level

-EN55024:1998

Humidity: 20 to 90% RH, non-condensing

Shock and Vibration Specification

(Complies with Astec Std Specification, Q3205

MTBF (Demonstrated): 400KHrs at full load, 40°C

Electrical Specs

Input

Input Range 90 - 264vac

Frequency 47 - 63 Hz, single phase AC

Inrush Current 15A Maximum

Efficiency 84% typical at full load, high line Conducted EMI FCC Subpart J EN55022 Class A Radiated EMI FCC Subpart J EN55022 Class A

Power Factor 0.99 typical Leakage Current 1.30mA @ 240VAC Hold Up Time 20ms Minimum

Output

Main DC Voltage +12v Stand-By +3.3vsb

Adjustment Range Factory Set, no pot adjustments

Regulation +12vdc; +5%/-3%

+3.3vsb; +5%/-4%
Over Current See Table 1 next page
Over Voltage +12vdc; 13.5 - 15vdc

+3.3vsb; 3.76 - 4.30vdc Under Voltage +12vdc; 11.0 - 11.5vdc +3.3vsb; 2.77 - 3.00vdc

Turn-On Delay 1 Second max, +12vOutput Rise Time 2 - 20mS, Monotonic

Logic Control

PS Inhibit When supply is inserted into the system the pin is

pulled LOW and power supply is ON after all other pins

are seated

PS_Status I2C port P6. When the power supply is on and running

normal P6 is low. When the power supply is off, either due to -PS_ON, PS_KILL, or a fault, then P6 is high.

AC_Pfail I2C port P7. P7 is high except when the power supply

turns the main outputs, not +3.3VSB, off due to an AC failure (AC missing or too low for power supply operation). If the supply is turned off due to -PS_ON,

PS_KILL, or a fault, then P7 remains high.

Fan_Fault The PSU will provides an open collector Tach 1 output. Tach_1 This signal is generated from the fan. The signal

This signal is generated from the fan. The signal should generate 2 pulses per revolution. The logic in

Rev 6.20.07

the system will be operating at 3.3V.

Safety

UL/cUL 60950 (UL Recognized) NEMKO+ CB Report EN60950 EN60950 CE Mark China CCC

Technical Support: (888) 41-ASTEC or (407) 241-2752 Americas: (760) 930-4600 Europe (UK) 44 (1384) 842-211 Asia (HK) 852-2437-9662

AMERICAS

5810 Van Allen Way Carlsbad, CA 92008 Telephone: 760-930-4600 Facsimile: 760-930-0698

EUROPE

Astec House, Waterfront Business Park Merry Hill, Dudley West Midlands, DY5 1LX, UK Telephone: 44 (1384) 842-211 Facsimile: 44 (1384) 843-355

ASIA

Units 2111-2116, Level 21 Tower1, Metroplaza 223, Hing Fong Road Fwai Fong, New Territories Hong Kong Telephone: 852-2437-9662 Facsimile: 852-2402-4426

Ordering Information

Table 1

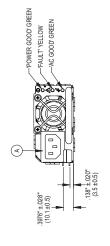
Output	Nominal Output	Set Point	Total	Minimum	Maximum	Output	Over
	Voltage Set Point	Tolerance	Regulation	Current	Current	Ripply P/P	Current
DS450-3	12.0vdc	+/-0.2%	+5/-3%	0A	37.0A	120mV	39.5 - 44.4A
	3.30vsb	+/-1%	+5/-4%	0A	3.0A	60mV	4.9A Avg, 7A Max
DS550-3	12.0vdc	+/-0.2%	+5/-3%	0A	45.0A	120mV	48.0A - 54.0A
	3.30vsb	+/-1%	+5/-4%	0A	3.0A	60mV	4.9A Avg, 7A Max

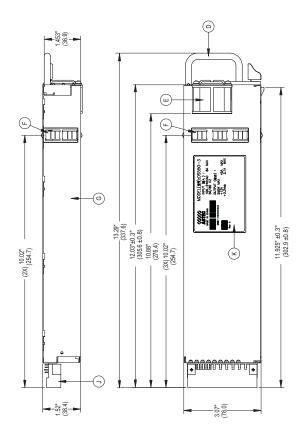
Table 2

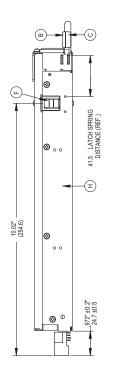
DC Output Connector Pinout Assignment	Male	con	necto	or as	view	ed fr	om t	he re	ar of	the	supp	ly:
		D 3	D 2	D 4		D.C.					$\overline{}$	-

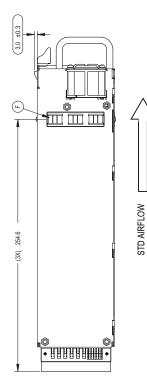
DC Output Connector Pinout Assignment		Male	conr	nect	or as	view	ed fr	om t	he re	ar of	the	supp	ly:	
D1 Dawen Commba Cida	Pin	Cianal Nama	D1	D2	D3	D4	D5	D6						
P1 - Power Supply Side	PB 1	Signal Name +12V RETURN	C1	C2	C3	C4	C5	C6	DR1	DR 2	DR3	PB4	DR5	PR6
	PB 2	+12V RETURN	B1	B2	В3	B4	B5	В6	וטו	1 02	1 03	ן דע ו	כטו	00
1. FCI Power Blade 51721 series	PB 3	+12V RETURN	A1	A2	А3	A4	A5	A6						
51721-10002406AA	PB 4	+12V KETOKN		_										
	PB 5	+12V												
2. Molex Power Connector	PB 6	+12V												
SD-87667 series	A1	PS KILL												
87667-7002	A2	+12V CURRENT SHARE												
	A3	LOGIC RETURN	IVE.											
Mating Connector (System Side)	A4	+3V3 STAND-BY												
withing connector (System side)	A5	A0 (I2C Address BIT 0 Signal)												
1.FCI Power Blade	A6	+3V3 STAND-BY		,										
51741-10002406CC	B1	LOGIC RETURN												
	B2	SPARE												
Strait Pins	В3	LOGIC RETURN												
2.55(.) 21.1	B4	+3V3 STAND-BY												
2.FCI Power Blade	B5	SDA (I2C Data Signal)												
51761-10002406AA	B6	PSON (Power Enable Signal)												
Right Angle	C1	LOGIC RETURN												
	C2	TACH 1 (Fan Fail Sign	ıal)											
	C3	LOGIC RETURN												
	C4	+3V3 STAND-BY												
	C5	SCL (I2C Clock Signal												
	C6	VIN_GOOD (AC Inpu												
	D1	-PS_PRESENT (Power Supply Seated)												
	D2	SPARE												
	D3	LOGIC RETURN												
	D4	+3V3 STAND-BY												
	D5	S_INT (Alert)	OI-)											
	D6	POK (Output Power	UK)											

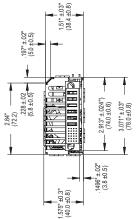
Mechanical Dimensions











NOTE: Dimensions given in (mm).